

REMARKS/ARGUMENTS

Claims 1-6, 8, 12 and 13 are pending. By this Amendment, claim 11 is cancelled without prejudice or disclaimer, and 1 is amended. Support for the amendments to claim 1 can be found, for example, in the present specification at page 9, lines 19 to 31 and page 10, line 28 to page 11, line 2, and in previously presented claims 1 and 11. No new matter is added. In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

Rejections Under 35 U.S.C. §103

A. Roeber, Kawase and Ebner

The Office Action rejects claims 1-4 and 11 under 35 U.S.C. §103(a) over U.S. Patent No. 5,858,492 to Roeber et al. ("Roeber") in view of U.S. Patent No. 4,737,536 to Kawase et al. ("Kawase") and U.S. Patent No. 6,433,087 to Ebner et al. ("Ebner"). By this Amendment, claim 11 is cancelled, rendering the rejection moot as to that claim. As to the remaining claims, Applicants respectfully traverse the rejection.

Claim 1 recites "[a] coolant line comprising: an outer layer comprising a polyamide molding composition; and an inner layer consisting of a polypropylene molding composition; wherein: the polyamide molding composition comprises PA612; the polypropylene molding composition comprises at least 50% by weight of polypropylene, at least 0.02% by weight of a heat stabilizer, and at least 0.01% by weight of a metal deactivator; the polypropylene is a propene-ethene block copolymer including 0.5 to 20 % by weight of ethene in copolymerized form; the inner layer has a thickness of at least 0.3 mm; and the outer layer is an outermost layer of the coolant line" (emphasis added). Roeber, Kawase and Ebner do not disclose or suggest such a coolant line.

As indicated above, claim 1 is amended to require that the PA-612 layer is the outermost layer of the recited coolant line.

Roeber discloses a multilayer composite that includes, in all embodiments, a polyvinylidene fluoride layer. *See, e.g., Roeber*, Abstract. Roeber contemplates two alternative types of configurations. In the first configuration, the polyvinylidene fluoride layer is the innermost layer, and a polyolefin layer is the outermost layer. *See Roeber*, TABLES 1 to 3. In the second configuration, the polyolefin layer is the innermost layer, and the polyvinylidene fluoride layer is the outermost layer. *See Roeber*, TABLES 1 to 3. While Roeber contemplates the use of a polyamide-containing layer (layer (II)), the polyamide-containing layer is never the outermost layer of the multi-layer composite. *See Roeber*, TABLES 1 to 3.

Instead, the polyamide-containing layer functions as an adhesion promoter for adhering the layers to which it is adjacent. *See Roeber*, column 2, lines 3 to 6. This property of the polyamide-containing layer of Roeber is also evident from, e.g., Examples 6, 7 and 8 of Roeber. In each of these examples, the polyamide-containing layer (I2 or I3) has a thickness of 0.1 mm, which is characteristic of an adhesive layer, not a structural layer. While Roeber may admit of the possibility of using the disclosed multi-layer composite to form a pipe for transporting cooling fluid (*see Roeber*, column 7, lines 21 to 25), Roeber certainly does not disclose or suggest a configuration in which a polyamide-containing layer is the outermost layer of the multi-layer composite.

Kawase does not disclose a pipe or tube including a polyamide layer at all, much less a polyamide layer that is an outermost layer of such pipe or tube. Likewise, Ebner does not disclose a pipe or tube including a polyamide layer as an outermost layer. As none of the references discloses or suggests a pipe or tube including a polyamide layer as an outermost

layer, the combination of references fails to disclose or suggest each and every feature of claim 1.

Claim 1 is further amended to specify that the polypropylene inner layer has a thickness of at least 0.3 mm. As is apparent from the experimental evidence in the present specification, employing a propylene inner layer having such a thickness provides an unexpected, superior effect. In particular, Example 5 of the present specification, which is a coolant line employing a polypropylene inner layer having a thickness of 0.2 mm, exhibits inferior impact toughness after internal contact storage in comparison to Examples 1 and 2 which are coolant lines employing a polypropylene inner layer having a thickness of at least 0.3 mm, as required by claim 1. These results are objective evidence of the improvements of the coolant line configuration of claim 1 over known coolant line configurations as in the cited references and, thus, these results rebut any alleged *prima facie* case of obviousness.

Claim 1 would not have been rendered obvious by Roeber, Kawase and Ebner. Claims 2-4 depend from claim 1 and, thus, also would not have been rendered obvious by Roeber, Kawase and Ebner. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

B. Roeber, Kawase Ebner and Jacoby

The Office Action rejects claim 5 under 35 U.S.C. §103(a) over Roeber in view of Kawase, Ebner and U.S. Patent No. 5,310,584 to Jacoby et al. ("Jacoby"). Applicants respectfully traverse the rejection.

For the reasons discussed above, Roeber, Kawase and Ebner fail to disclose or suggest each and every feature of claim 1. Jacoby does not remedy the deficiencies of Roeber, Kawase and Ebner. Jacoby is cited for its alleged disclosure of a polypropylene composition stabilized with a hindered phenol. See Office Action, page 6. However, Jacoby,

like Roeber, Kawase and Ebner, fails to disclose or suggest a coolant line including an outermost layer including PA612, and a polypropylene inner layer that is at least 0.3 mm thick. Accordingly, the combination of references fails to disclose or suggest each and every feature of claim 1.

Claim 1 would not have been rendered obvious by Roeber, Kawase, Ebner and Jacoby. Claim 5 depends from claim 1 and, thus, also would not have been rendered obvious by Roeber, Kawase, Ebner and Jacoby. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

C. Roeber, Kawase, Ebner and Dupuy

The Office Action rejects claim 6 under 35 U.S.C. §103(a) over Roeber in view of Kawase, Ebner and U.S. Patent No. 7,238,738 to Dupuy et al. ("Dupuy"). Applicants respectfully traverse the rejection.

For the reasons discussed above, Roeber, Kawase and Ebner fail to disclose or suggest each and every feature of claim 1. Dupuy does not remedy the deficiencies of Roeber, Kawase and Ebner. Dupuy is cited for its alleged disclosure of a thermoplastic material including a nano-sized filler. *See* Office Action, page 7. However, Dupuy, like Roeber, Kawase and Ebner, fails to disclose or suggest a coolant line including an outermost layer including PA612, and a polypropylene inner layer that is at least 0.3 mm thick. Accordingly, the combination of references fails to disclose or suggest each and every feature of claim 1.

Claim 1 would not have been rendered obvious by Roeber, Kawase, Ebner and Dupuy. Claim 6 depends from claim 1 and, thus, also would not have been rendered obvious by Roeber, Kawase, Ebner and Dupuy. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

D. Roeber, Kawase, Ebner and Strebel

The Office Action rejects claim 8 under 35 U.S.C. §103(a) over Roeber in view of Kawase, Ebner and U.S. Patent No. 7,375,162 to Strebel et al. ("Strebel"). Applicants respectfully traverse the rejection.

For the reasons discussed above, Roeber, Kawase and Ebner fail to disclose or suggest each and every feature of claim 1. Strebel does not remedy the deficiencies of Roeber, Kawase and Ebner. Strebel is cited for its alleged disclosure of a propylene-ethylene block copolymer having a particular melt flow rate. *See* Office Action, pages 8 to 9. However, Strebel, like Roeber, Kawase and Ebner, fails to disclose or suggest a coolant line including an outermost layer including PA612, and a polypropylene inner layer that is at least 0.3 mm thick. Accordingly, the combination of references fails to disclose or suggest each and every feature of claim 1.

Claim 1 would not have been rendered obvious by Roeber, Kawase, Ebner and Strebel. Claim 8 depends from claim 1 and, thus, also would not have been rendered obvious by Roeber, Kawase, Ebner and Strebel. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

E. Roeber, Kawase, Ebner and Iwata

The Office Action rejects claims 12 and 13 under 35 U.S.C. §103(a) over Roeber in view of Kawase, Ebner and U.S. Patent No. 7,232,297 to Iwata et al. ("Iwata"). Applicants respectfully traverse the rejection.

For the reasons discussed above, Roeber, Kawase and Ebner fail to disclose or suggest each and every feature of claim 1. Iwata does not remedy the deficiencies of Roeber, Kawase and Ebner. Iwata is cited for its alleged disclosure of a tube having corrugated outer

layer and a smooth inner layer. *See* Office Action, page 9. However, Iwata, like Roeber, Kawase and Ebner, fails to disclose or suggest a coolant line including an outermost layer including PA612, and a polypropylene inner layer that is at least 0.3 mm thick. Accordingly, the combination of references fails to disclose or suggest each and every feature of claim 1.

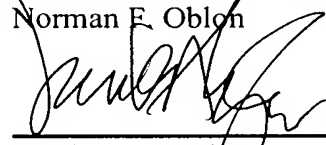
Claim 1 would not have been rendered obvious by Roeber, Kawase, Ebner and Iwata. Claims 12 and 13 depend from claim 1 and, thus, also would not have been rendered obvious by Roeber, Kawase, Ebner and Iwata. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

#### Conclusion

For the foregoing reasons, Applicants submit that claims 1-6, 8, 12 and 13 are in condition for allowance. Prompt reconsideration and allowance are respectfully requested.

Respectfully submitted,

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